

HYD 5-20KTL-3PH

5 / 6 / 8 / 10 / 15 / 20 kW

Three-phase hybrid inverter



Simplicity

- Light weight and convenient transportation
- LCD and App for easy commissioning



Safety

- IP65 protection rating
- Integrated type II surge protection



Flexibility

- On/off grid seamless switching (10ms)
- Maximum two battery inputs



Robustness

- Max. 150% PV input, and max. 32A per MPPT
- Supports three-phase unbalanced loads

Model	HYD 5KTL-3PH	HYD 6KTL-3PH	HYD 8KTL-3PH	HYD 10KTL-3PH	HYD 10KTL-3PH-A	HYD 15KTL-3PH	HYD 20KTL-3PH
PV Input							
Recommended Max. PV Power	7500Wp	9000Wp	12000Wp	15000Wp	15000Wp	22500Wp	30000Wp
Max. Input Voltage				1000 Vd.c.			
Start-up Voltage				200 Vd.c.			
Rated Input Voltage				600 Vd.c.			
MPPT Operating Voltage Range				180-960 Vd.c.			
Number of MPPT				2			
Max. Number of Input Strings per MPPT	1/1			2/2			
Max. Input Current ^[1]	16/16 A			32/32A			
Max. Isc ^[2]	22.5/22.5 A			45/45 A			
AC Output (Grid)							
Rated Output Power	5 kW	6 kW	8 kW	10 kW	10 kW	15 kW	20 kW
Rated Output Current	7.6/7.2/6.9 A	9.1/8.7/8.3 A	12.1/11.6/11.1 A	15.2/14.5/13.9 A	15.2/14.5/13.9 A	22.7/21.7/20.8 A	30.3/29.0/27.8 A
Rated Output Voltage ^[3]	3N--+PE, 380/400/415 Va.c.						
Rated Output Frequency	50/60 Hz						
Max. Apparent Power	5.5 kW	6.6 kW	8.8 kW	11 kW	10 kW	16.5 kW	22 kW
Max. Output Current	8.3/8.0/7.6 A	10.0/9.6/9.2 A	13.3/12.8/12.2 A	16.7/15.9/15.3 A	15.2/14.5/13.9 A	25.0/23.9/22.9 A	33.3/31.9/30.6 A
THDi	< 3%						
Power Factor Range	0.8 lagging - 0.8 leading						
Battery							
Battery Type ^[4]	Lithium-ion & Lead-acid						
Voltage Range	180-800 Vd.c.						
Number of Battery Input Channels	1			2			
Max. Charging Power	5 kW	6 kW	8 kW	10 kW	10 kW	15 kW	20 kW
Max. Discharging Power	5 kW	6 kW	8 kW	10 kW	10 kW	15 kW	20 kW
Max. Charging Current	25 A	25 A	25 A	25/25 A	25/25 A	25/25 A	25/25 A
Max. Discharging Current	25 A	25 A	25 A	25/25 A	25/25 A	25/25 A	25/25 A
BMS Communication	CAN/RS485						
AC Output(Backup)							
Rated Output Power	5 kW	6 kW	8 kW	10 kW	10 kW	15 kW	20 kW
Rated Output Current	7.6/7.2/6.9 A	9.1/8.7/8.3 A	12.1/11.6/11.1 A	15.2/14.5/13.9 A	15.2/14.5/13.9 A	22.7/21.7/20.8 A	30.3/29.0/27.8 A
Rated Output Voltage ^[3]	3N--+PE, 380/400/415 Va.c.						
Rated Output Frequency	50/60Hz						
Rated Apparent Power	5 kVA	6 kVA	8 kVA	10 kVA	10 kVA	15 kVA	20 kVA
Max. Apparent Power	5.5 kVA	6.6 kVA	8.8 kVA	11 kVA	11 kVA	16.5 kVA	22 kVA
Peak Output Apparent Power	7500VA, 60s	9000VA, 60s	12000VA, 60s	15000VA, 60s	15000VA, 60s	22500VA, 60s	26000VA, 60s
Max. Output Current	8.3/8.0/7.6 A	10.0/9.6/9.2 A	13.3/12.8/12.2 A	16.7/15.9/15.3 A	16.7/15.9/15.3 A	25.0/23.9/22.9 A	33.3/31.9/30.6 A
THDv(@ linear load)	< 3%						
Switching Time	10ms default						
Efficiency							
Max. MPPT Efficiency				99.9%			
Max. Efficiency	98.0%	98.0%	98.0%	98.2%	98.2%	98.2%	98.2%
European Efficiency	97.5%	97.5%	97.5%	97.7%	97.7%	97.7%	97.7%
Max. Efficiency of Charging/Discharging ^[5]	97.6%	97.6%	97.6%	97.8%	97.8%	97.8%	97.8%
Protection							
DC Switch				Yes			
PV Reverse Connection Protection				Yes			
Battery Reverse Connection Protection				Yes			
Output Short Circuit Protection				Yes			
Output Overcurrent Protection				Yes			
Output Overvoltage Protection				Yes			
Insulation Impedance Detection				Yes			
Residual Current Detection				Yes			
Anti-island Protection				Yes			
Surge Protection	PV: Type II , AC: Type II						
General Parameters							
Operating Temperature Range	-30℃ ~ +60℃ (derating above + 45℃)						
Relative Humidity Range	5%-95%						
Max. Operating Altitude	4000m (derating above 2000m)						
Standby Self-consumption ^[6]	< 25W						
Inverter Topology	Non-Isolation						
Installation Method	Wall Mounted						
IP Rating	IP65						
Dimensions(W×H×D)	587×515×261 mm						
Cooling Mode	Natural			Forced Airflow			
Weight	33 kg			39.5 kg			
Communication	CAN/RS485/Wi-Fi, Optional: 4G/LAN						
Display	LCD & APP						

[1] PV Max. Input Current may change(12.5A to 16A/25A to 32A), please refer to the label on the body. [2] PV Max. Isc may change(15A to 22.5A/30A to 45A), please refer to the label on the body.

[3] AC Output Rated/Max. Output Current corresponds to Rated Output Voltage. 20K model, for example, when the Rated Output Voltage is 400V, the Rated Output Current is 29A; most of the Rated Output Voltage is 415V, the Rated Output Current is 27.8A.

[4] Please refer to document "SOFAR inverter Model compatible battery list". [5] Battery-AC maximum efficiency of battery charge and discharge.

[6] Standby loss at rated input voltage. [7] If you choose the Belgian safety code, the Max. Apparent Power of HYD 5- 20KTL-3PH is 10 KVA.

*All specifications are subject to change without notice.